

Appl. No: 09/759,089
Amtd. Dated December 28, 2005
Reply to Office Action mailed September 29, 2005

REMARKS/ARGUMENTS

Prior to this Amendment, Claims 1-4, 6-10, 12-15, 17-36, 38-59, and 61-68 were pending in the patent application.

Claim 1 is amended to further stress that the method involves a user providing input to refine and/or define the communication monitoring. Specifically, the user selects a category for testing saved communications and also selects regular expressions that may be used as criterion for that selected category, which allows the user great control over the monitoring that is performed. Claim 1 is also amended to correct an antecedent basis issue with "the preselected criterion." Dependent claims 2 and 3 are amended to correct antecedent basis issues after the amendment to claim 1, claim 4 is amended to stress the user also is allowed to select weights for regular expressions, and claim 8 is amended to correct a prior typographical error.

Independent claim 34 is amended to call for a threshold value to be selected based on user input, which is not shown by the art of record.

After entry of the Amendment, claims 1-4, 6-10, 12-15, 17-36, 38-59, and 61-68 remain for consideration by the Examiner.

Rejections under 35 U.S.C §112

The Office Action of September 29, 2005 rejected claim 1 as being indefinite due to lack of antecedent basis for the limitation "the preselected criterion" in line 8. Claim 1 is amended to address this rejection and is now believed definite.

Rejections under 35 U.S.C §102

The office Action also rejected claims 34-35, 38-39, 44, 47-50, 52-55, 57, 58, and 61-64 were again rejected under 35 U.S.C. §102(e) based upon U.S. Pat. No. 6,266,664 ("Russell-Falla"). This rejection is respectfully traversed.

In the prior Amendment, Claim 34 was amended to clarify that the predetermined expressions are defined by a user (e.g., a network administrator, IT

Appl. No: 09/759,089
Amtd. Dated December 28, 2005
Reply to Office Action mailed September 29, 2005

specialist, and the like). Further, in this Amendment, claim 34 is amended such that the threshold used to determine whether a monitored network session should be stored is also selected based on user input. At least these features of claim 34 are not shown or suggested by Russell-Falla. As noted in the prior Amendment, Russell-Falla does not suggest any means by which the user can define expressions for use in testing as called for in claim 34. Instead, Russell-Falla determines the contents of database 30 by a neural network or other automated analysis of large numbers of content examples. Applicants have found that the complexity of this analysis can be avoided by allowing a user to define predetermined expressions, as called for in claim 34. Moreover, user-defined criteria enable the user to express control and purpose in the defined criteria and so enable improved performance.

Applicant urges the Examiner to carefully consider Russell-Falla's teaching from col. 6, line 49 to col. 8, line 3. In this section, Russell-Falla describes in detail its use of a neural-network in which each term in a list is initially assigned a weight "at random" and an algorithm is used to "arrive at a set of weightings" based on processing of "10,000 web pages." No user input is provided at all during this learning process as described in Russell-Falla as "training pages are statistically analyzed." In direct contrast to this teaching of automated learning based on processing large volumes of web pages, the method of claim 34 calls for testing content of a network session using expressions from two or more categories "each containing predetermined expressions that are defined by a user." Hence, the "testing" element of claim 34 is not shown or suggested by Russell-Falla.

The Office Action cites col. 4, lines 4-13 but this provides no teaching of a user defining the regular expressions but instead is referring to the training of a neural network. The Office Action further cites col. 6, lines 49-64 and col. 7, lines 16-29, but these are the sections that are also cited by the Applicant as teaching away from a user being able to define regular expressions for use in monitoring network sessions (e.g., instead Russell-Falla teaches an automated process using thousands of web

Appl. No: 09/759,089
Arndt, Dated December 28, 2005
Reply to Office Action mailed September 29, 2005

pages). Applicant also requests that the Examiner study Applicant's specification from page 6, line 3 to page 8, line 13 for a good description of an implementation of Applicant's invention because the provided example and description clearly show how user input can be used to select regular expressions for categories as opposed to Russell-Falla. On page 22, the Examiner asserts that Russell-Falla teaches "manual classification of training data" but Applicant could find no teaching of such manual classification and requests a more specific cite to allow a proper reply to this argument.

Further, claim 34 calls for maintaining a sum of values associated with said predetermined expressions found within at least one category and when the sum exceeds a user defined threshold, storing such data. Russell-Falla fails to teach storing data when it exceeds a threshold for a particular category. The Office Action cites col. 5, lines 47-64, but at this citation, the reference merely states that a threshold can be used to decide whether to block a web page or to display it. If blocked, there is no teaching that the web page is stored as called for in claim 34. The Office Action also cites col. 6, lines 29-34 but at this citation, it is taught that a notification is sent to an administrator who may allow the page, i.e., overrule the decision based on the threshold, but no teaching of saving the content is provided. For this additional reason, claim 34 is not anticipated by the reference.

Yet further, as discussed in the prior Amendment, the following arguments were provided and Applicant believes they have not been adequately addressed by the Examiner in the response to arguments: "Claim 34 calls for, among other things, removing data content that does not contain language elements. The Office action cites a portion of Russell-Falla that relates to scanning an HTML page for regular expressions. It appears that the entire HTML page is used as input for analysis, including non-language elements. Russell-Falla does not show or suggest any activity of removing data content that does not contain language elements."

Appl. No: 09/759,089
Amdt. Dated December 28, 2005
Reply to Office Action mailed September 29, 2005

"Further, the Russell-Falla reference does not show or fairly suggest capturing data on a network comprising multiple half sessions of TCP/IP network communications. An HTML page comprises text data extracted from one or more TCP packets that are assembled at the browser according to the HTML rules. HTML is a markup language, not a protocol. Accordingly, an HTML page does not, by itself, define a "session" or "half session". An HTML page, like any computer file, may be delivered over a network communication protocol, however, the HTML page is itself entirely independent of any particular network communication protocol. Hence, an HTML page is by and intent design entirely unaware of any concept of "session" that exists on the network itself and so cannot satisfy the claim limitation "wherein the data comprises multiple half sessions..." appearing in claim 34."

"The HTML page is distinct from a TCP/IP half session. Significantly, the a TCP/IP (or other network level) communication typically includes a wide variety of non-HTML information. This data may include header information, cookies, parameter information, and the like. In some cases the network communication may include malicious (or benevolent) code or hidden data that "piggy backs" on the network communication packets used to deliver an HTML page. This is equally true of other applications such as email, instant messaging, and the like. This piggy backed data is not a part of the HTML page in Russell-Falla, but it is a part of the captured half session in claim 34. Hence, this data will escape analysis in Russell-Falla, but will be subject to monitoring by the invention of claim 34."

Claims 35, 37-39, 44, 47-50, 52-54, which depend on claim 34, are allowable for at least the same reasons as claim 34 set out above.

Independent claim 55 calls for, among other things, "defining categories with weighted predetermined expressions" (emphasis added) and "maintaining a sum of values associated with said predetermined expressions found within each category." These features of claim 55 are not shown or suggested in the relied on reference. As

Appl. No: 09/759,089
Arndt. Dated December 28, 2005
Reply to Office Action mailed September 29, 2005

noted hereinbefore and admitted in the Office action, Russell-Falla does not teach plural categories. Applicant maintains the position that Russell-Falla teaches away from using multiple categories. Moreover, if one were to modify Russell-Falla as suggested in the Office action, one might, by happenstance or invention, come up with the solution called for in claim 55. However, that solution is not taught or suggested by the reference itself. Further, claim 55 calls for storing the remaining data if the sum of values associated with said predetermined expressions present within a category exceeds a threshold value. For at least these reasons and as discussed with reference to claim 34, claim 55, and claims 57, 58, and 60-64, which depend from claim 55, are allowable over Russell-Falla.

Further, claim 55 requires that the predetermined expressions for "categories" are "defined by a user." As discussed with reference to claim 34, Russell-Falla fails to show that a user can define expressions – but instead lists of words or expressions on a page are randomly weighted and learning is performed to establish without user input a set of learned weights for expressions on a web page that provide a likelihood that the page contains a certain content. There is no teaching in Russell-Falla that a user can define expressions nor that such user-defined expressions may be weighted and assigned to categories. Because each and every element of claim 55 is not shown by Russell-Falla, this reference does not support an anticipation rejection of claim 55, and Applicant respectfully requests that the rejection be withdrawn.

Dependent claim 56 further calls for the data to be stored (which Russell-Falla fails to show at all) "only if the sum of predetermined expressions exceeds the threshold value in a plurality of categories." The Office Action admits that Russell-Falla fails to show a concurrent use of categories but maintains the rejection based on 102 anticipation. Applicant believes that at best this should be an obviousness rejection, but more likely, Russell-Falla does not suggest teach comparing a sum to determine if it "exceeds the threshold in a plurality of categories." The Examiner's arguments indicate that at best Russell-Falla would teach using differing categories

Appl. No: 09/759,089
Arndt. Dated December 28, 2005
Reply to Office Action mailed September 29, 2005

but would not teach comparing a sum to multiple categories.

Rejections under 35 U.S.C §103

Additionally, claims 1-4, 6, 7, 11-13, 15-21, 23, 27-29, 32, 33, and 65-67 were rejected under 35 U.S.C. §103(a) based upon Russell-Falla in view of U.S. Pat. No. 6,453,345 ("Trcka"). This rejection is respectfully traversed based on the following remarks.

Claim 1 includes limitations similar to that found in claim 34 and is, hence, believed allowable over Russell-Falla for the reasons for allowing claim 34 over this reference. Specifically, claim 1 calls for storing of the communications when a preselected criterion is determined and calls for the user to define the criterion, and as discussed with reference to claim 34, Russell-Falla fails to teach either of these features of the claimed invention. Further, claim 1 calls for "receiving input from a user selecting a subject matter category for use in monitoring network communications" and this added limitation is not shown or suggested by Russell-Falla. Further, claims 1 calls for the criterion to be associated with the selected subject matter category and regular expressions to be associated with each category – hence, the user is able to select a category and define criterion including regular expressions. These features are not shown or suggested by Russell-Falla which, in contrast, teaches using a neural network to learn from inspecting thousands of web pages.

Further, as noted in the last Amendment, claim 1 calls for monitoring network communications wherein each network communication comprises multiple half sessions, then storing at least some of the communications on disk. An HTML page in Russell-Falla is by design distinct and independent of a session at the network communication level. Analyzing an HTML page is not fairly construed as monitoring TCP/IP network communications.

Trcka does not overcome the deficiencies of Russell-Falla. Trcka does not teach a user selecting a category, defining criterion for inspecting network

Appl. No: 09/759,089
Amdt. Dated December 28, 2005
Reply to Office Action mailed September 29, 2005

communications, and does not show that the categories may have regular expressions. Trcka does not teach any specific type of analysis that would be performed on the raw data packets. Hence, Trcka does not teach the step of testing the stored communication for the presence of at least one user-defined criterion. Further, Trcka does not show monitoring TCP/IP network communications. Trcka stores raw data packets at a network communication at a data link or lower level (e.g., Ethernet packets or lower). This is data below the transport level, and below the TCP/IP level called for in claim 1. Further, claim 1 calls for storing the communication in a conditional manner, "if the presence of at least one preselected criterion is determined." Trcka teaches that all raw data packets are stored, not a process of storing some and deleting some as called for in claim 1. As discussed in reference to claim 34, Russell-Falla does not explicitly teach storing any of the communication. Accordingly, the combination of Russell-Falla and Trcka does not suggest the invention of claim 1.

Moreover, there is no teaching in the references as to how such a combination would be achieved. The references appear to teach against the combination suggested in the office action. Russell-Falla deals with analyzing a web page before it is displayed whereas Trcka specifically captures data passively without interrupting delivery. Russell-Falla must analyze HTML pages, not network packets, whereas Trcka must capture network packets at a very low level. The two references, as taught in the references themselves, describe incompatible systems. Only Applicant has recognized and invented a way for performing text analysis akin to what Russell-Falla is doing on HTML pages in an offline manner within a network connection, akin to what Trcka is doing at a data link layer.

Claims 6, 7, 11-13, 15-21, 23, 27-29, 32 and 33, which depend from claim 1, are allowable for at least the same reasons as claim 1 from which they depend as well as the individual limitations appearing in those claims.

Appl. No: 09/759,089
Amdt. Dated December 28, 2005
Reply to Office Action mailed September 29, 2005

Also, in the Office Action, Claims 30 and 31 were rejected under 35 U.S.C. §103(a) as being unpatentable over Russell-Falla in view of Trcka. This rejection is traversed based on the following remarks. Claims 30 and 31, which depend from claim 1, are allowable over the combination of Russell-Falla and Trcka for at least the same reasons stated above for claim 1.

Additionally, Claims 36, 51 and 59 were rejected under 35 U.S.C. §103(a) based upon Russell-Falla. This rejection is respectfully traversed. Claims 36, 51 and 59 are allowable over Russell-Falla for at least the reasons stated above with respect to claims 34 and 55.

Further still, the Office Action rejected claims 8-10, 14, 22 and 24-26 under 35 U.S.C. §103(a) based upon Russell-Falla in view Trcka and in further view of U.S. Pat. No. 6,366,910 ("Rajaraman"). This rejection is respectfully traversed.

Rajaraman does not supply the deficiencies of Russell-Falla noted above. With respect to claim 1 specifically, the Rajaraman reference does not show or suggest monitoring TCP/IP layer communications, storing half sessions to disk or the use of plural categories as noted above. Rajaraman involves searching hierarchical data that has already been categorized. Claims 8-10, 14, 22 and 24-26, on the other hand, involve hierarchical weighted scoring of data for the purpose of subsequent categorizing. For at least these reasons it is respectfully requested that the rejection of claims 8-10, 14, 22 and 24-26 be withdrawn.

Additionally, Claims 40-43, 45, 46 and 56 were rejected under 35 U.S.C. §103(a) based upon Russell-Falla in view of Rajaraman. This rejection is respectfully traversed.

Rajaraman does not supply the deficiencies of Russell-Falla noted above with respect to claim 34 and claim 55 from which these claims depend. It is respectfully requested that the rejection be withdrawn. Further, claim 40 calls for "prioritizing the order in which regular expressions with a subject matter category are tested."

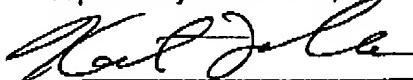
Appl. No: 09/759,089
Amdt. Dated December 28, 2005
Reply to Office Action mailed September 29, 2005

Rajaraman is cited at col. 9, lines 19-28 for providing this teaching, but at this citation, a search engine is said to prioritize scores of results from a search. There is no teaching of prioritizing an order that regular expressions are used to test network communications (let alone within a subject matter category). Claim 41 calls for "negative value regular expressions to be tested first." Again, Rajaraman is cited at col. 9, lines 19-28, but there is no discussion whatsoever of doing a search with negative valued expressions nor that such expressions should be used first in a search (let alone of a processing of a network communication by looking for regular expressions that are associated with negative values first). The value of such a technique is explained in Applicant's specification in the example provided on pages 7 and 8 (e.g., less false positives are generated by using negative valued regular expressions first). Dependent claim 42 provides another specific limitation regarding the order of use of regular expressions based on their associated value, and Rajaraman simply provides no teaching of this portion of Applicant's claimed invention. For these additional reasons, claims 40-42 are not shown or suggested by the combined teaching of these two references.

Conclusion

In view of all of the above, it is requested that a timely Notice of Allowance be issued in this case. No fee is believed due with this response, but any fee deficiency associated with this submittal may be charged to Deposit Account No. 50-1123.

Respectfully submitted,



Kent Lembke, Reg. No. 44,866
Hogan & Hartson LLP
One Tabor Center
1200 17th Street, Suite 1500
Denver, Colorado 80202
(720) 406-5378 Tel

December 28, 2005